

Title (en)
SEPARATING MEMBRANE FOR FUEL CELL

Title (de)
TRENNMEMBRAN FÜR EINE BRENNSTOFFZELLE

Title (fr)
MEMBRANE DE SÉPARATION DESTINÉE À UNE PILE À COMBUSTIBLE

Publication
EP 1901379 A4 20120606 (EN)

Application
EP 06780855 A 20060630

Priority
• JP 2006313530 W 20060630
• JP 2005193630 A 20050701
• JP 2005288035 A 20050930

Abstract (en)
[origin: EP1901379A1] The present invention discloses: a membrane for fuel cell, comprising: a solid polymer electrolyte membrane composed of a crosslinked ion exchange resin, and a polymer having a weight-average molecular weight of 5,000 to 1,000,000 and having a charge group of polarity opposite to that of the ion exchange group of the ion exchange resin, which polymer is adhered onto at least one surface of the solid polymer electrolyte membrane in an amount of 0.0001 to 0.5 mg/cm² preferably in a state that, when the membrane for fuel cell is immersed in a 50 mass % aqueous methanol solution of 30°C, there is substantially no difference in the adhesion amount of the polymer before and after the immersion; and a membrane-electrode assembly for fuel cell, comprising: the above-mentioned membrane for fuel cell, and a catalyst electrode layer bonded to the membrane for fuel cell, which catalyst electrode layer contains an ion exchange resin having the same polarity as the crosslinked ion exchange resin composing the solid polymer electrolyte membrane, and a catalyst substance.

IPC 8 full level
H01M 8/02 (2006.01); **H01M 8/10** (2006.01)

CPC (source: EP KR US)
H01M 4/86 (2013.01 - KR); **H01M 8/02** (2013.01 - KR); **H01M 8/0289** (2013.01 - EP US); **H01M 8/10** (2013.01 - KR); **H01M 8/1011** (2013.01 - EP US); **H01M 8/1025** (2013.01 - EP US); **H01M 8/1027** (2013.01 - EP US); **H01M 8/103** (2013.01 - EP US); **H01M 8/1039** (2013.01 - EP US); **H01M 8/1044** (2013.01 - EP US); **H01M 8/1067** (2013.01 - EP US); **H01M 8/1072** (2013.01 - EP US); **H01M 8/1088** (2013.01 - EP US); **H01M 4/921** (2013.01 - EP US); **Y02E 60/50** (2013.01 - EP US); **Y02P 70/50** (2015.11 - EP US)

Citation (search report)
• [X] WO 0163683 A2 20010830 - TOYOTA MOTOR CO LTD [JP], et al
• [X] EP 1496561 A2 20050112 - TOKUYAMA CORP [JP]
• [Y] JP 2005085544 A 20050331 - TOYOTA CENTRAL RES & DEV
• [Y] JP H11335473 A 19991207 - TOKUYAMA CORP
• [Y] JP 2001167775 A 20010622 - TOSHIBA CORP
• [Y] WO 2004051776 A1 20040617 - SANYO ELECTRIC CO [JP], et al & US 2005181285 A1 20050818 - SAKAMOTO SHIGERU [JP], et al
• See references of WO 2007004716A1

Cited by
CN103026540A; US10096838B2; US9899694B2; US10483581B2; US8148030B2; US9938308B2; US8753761B2; WO2011154835A1; US9692077B2; US10644342B2; US10253051B2; US10930937B2; US10316047B2; US10497958B2; US9837679B2; US10734666B2; US8691413B2; US9865893B2; US10320023B2; US10651489B2; US9991543B2; US10056639B2; US10164284B2; US10741864B2; US9768463B2; US9991544B2; US10014546B2; US10065977B2; US10377687B2; US10707513B2; US10343964B2

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
EP 1901379 A1 20080319; EP 1901379 A4 20120606; KR 101218518 B1 20130103; KR 20080020645 A 20080305; US 2010081029 A1 20100401; US 7923166 B2 20110412; WO 2007004716 A1 20070111

DOCDB simple family (application)
EP 06780855 A 20060630; JP 2006313530 W 20060630; KR 20077030654 A 20060630; US 99365306 A 20060630